Form C-104
Rev. 02/2009

VALUE ENGINEERING CHANGE PROPOSAL
MISSOURI DEPARTMENT OF TRANSPORTATION

☐ **Conceptual Proposal** ☒ **Final Proposal** **Date** 03/09/10

Contract ID 090522-623 **Job No.** J6I2189

County St. Louis City 70 **Original Bid Cost** $4,435,377.86

Contractor Fred Weber, Inc. **By** Michael Ax

Designed By _____ **Phone** (314) 344-0070

VECP# 10-22 **(to be completed by C.O.)** **VECP** ☒ **or** **PDVECP** ☐

1. **Description of existing requirements and proposed change(s). Advantages/Disadvantages**
   The current drawing for Bridge A01393 and A01414 call for the wing walls of the bridge to be removed and replaced. The old wall is 12" thick and it is being replaced with 12" of new concrete. In leiu of removing and replacing the backwall, we are offering to leave the existing wall in place and form and pour the new wall in front of the existing wall. The new wall will end at the end of the existing beam seat and will tie in to the existing elevation of the top of the wall as shown on the plans. The top of the wall will be sloped down towards the bridge and will match elevation "F" shown in the plans.

2. **Estimate of reduction in construction costs.** $20,000

3. **Prediction of any effects the proposed change(s) will have on other department costs, such as maintenance and operations.**
   None

4. **Anticipated date for submittal of detailed change(s) of items required by Section 104.6 of the Specifications.**

   03/09/10
   (date)

5. **Deadline for issuing a change order to obtain maximum cost reduction, noting the effect of contract completion time or delivery schedule.**

   03/15/10 (date) — Ready to begin work. Willl work on a verbal agreement (effect)

6. **Dates of any previous or concurrent submission of the same proposal.**

   N/A
   (date and/or dates)

Additional Comments:

**** Portion Below This Line To Be Filled Out by MoDOT ****

Comments:
This concept proposal provides for a change in the existing abutments #1 & #4 modification of Bridge A01393, Sta. 907+79.30 Rte 70 and Bridge A01414, Sta. 929+21.62 Rte 70. This change will effect the Partial Removal of Substructure Concrete (Line No. 1050) and Partial Removal of Substructure Concrete (Line No. 1300), respectively. Based on discussions with MoDOT's design consultant (CMT), approval is recommended for this concept proposal. Final cost savings are currently under review.

Submitted By Resident Engineer — 3/18/10 Date

Comments:

☑ **Approval Recommended**
☐ **Rejection Recommended**

District Engineer — 3/22/10 Date

Comments:

☑ **Approval Recommended**
☐ **Rejection Recommended**

Federal Highway Administration — 3/22/2010 Date
Required for FHWA Full Oversight Projects

Comments:

☑ **Approval**
☐ **Rejection**

State Construction and Materials Engineer — 3.22.10 Date

Distribution: Resident Engineer, Project Manager, District Construction & Materials Engineer, State Construction & Materials Engineer, FHWA Value Engineering Administrator – MoDOT, P. O. Box 270, Jefferson City, MO 65102

"Ax, Michael J." <mjax@fredweberinc.com>
03/16/2010 05:04 PM

To "John.Grana@modot.mo.gov" <John.Grana@modot.mo.gov>, "Michael.Litzau@modot.mo.gov"
cc "Clark, Matthew R." <mrclark@fredweberinc.com>
bcc
Subject Cost Detail for Backwall changes

1 attachment

VE - Backwall Change Cost Detail Sheet.pdf.pdf

John,

Attached is the cost breakdown sheet for the changes to the backwall. I'd like to do it this way since it simplifies the contract changes. If you look at the overall package, it actually adds about 2.5 cy to the substructure for each bridge, and the Rebar will go down, however the steel for Madison is already sitting out onsite. I propose we make the changes on this item and pay plan on the other two. Let me know if you have any objections to doing it this way.

Thanks,

Michael Ax P.E.
General Manager
Iron Mountain Construction Services
Office - (314) 316-6154
Fax - (314) 316-6172
mjax@ironmountaintraprock.com

Value Engineering Eliminating the Removal of the Backwall

Bid Items As Bid

Line #'s	Item #'s				Unit Price	Total
1050	2163502	Partial Removal of Substructure Concrete	1.00	LS	$ 25,000.00	$ 25,000.00
1300	2163502	Partial Removal of Substructure Concrete	1.00	LS	$ 25,000.00	$ 25,000.00
					Bid Total	**$ 50,000.00**

Revised Bid Items to Reflect the Changes

CONT

Line #'s	Item #'s				Unit Price	Total
~~1050~~	2163502	Partial Removal of Substructure Concrete	1.00	LS	$ 15,000.00	$ 15,000.00
~~1300~~	2163502	Partial Removal of Substructure Concrete	1.00	LS	$ 15,000.00	$ 15,000.00
					Cost Total	**$ 30,000.00**

NEED BREAKDOWN ORIGINAL VS REVISED

Total For Proposal

VE Proposal #'s	
Original Cost for Backwall Removal	$ 50,000.00
Revised Bid Items for Value Engineering	$ 30,000.00
Difference	$ 20,000.00
VE Split	$ 10,000.00

John V Grana/D6/MODOT
03/05/2010 01:22 PM

To mjax@fredweberinc.com
cc Michael J Litzau/D6/MODOT@MODOT, James A Middleton/D6/MODOT@MODOT
bcc
Subject Re: Fw: Madison and St. Ave Wall Modifications

Mike,

Looks like we could entertain Option 2. Let us know how you would like to proceed. Thanks.

James A Middleton/D6/MODOT

James A Middleton/D6/MODOT
03/05/2010 08:15 AM

To John V Grana/D6/MODOT@MODOT
cc
Subject Fw: Madison and St. Ave Wall Modifications

CMT's response to wall modifications at Madison and St. Louis.

Jim Middleton, P.E.
MRB Project Manager
707 North 2nd Street
St. Louis, MO 63102
NEW PHONE NUMBER (314) 453-1840
email: James.Middleton@modot.mo.gov
---- Forwarded by James A Middleton/D6/MODOT on 03/05/2010 08:11 AM ----

Ron Breville
<rbreville@cmtengr.com>
03/04/2010 02:11 PM

To "James.Middleton@modot.mo.gov" <James.Middleton@modot.mo.gov>
cc Greg Law <glaw@cmtengr.com>
Subject RE: Madison and St. Ave Wall Modifications

Jim:

We have a couple concerns with option 1: The existing beam seat will remain exposed and the 6 inch step at the top of the existing retaining wall and the existing backwall will also remain. The exposed beam seat will probably become a maintenance issue? Aesthetics may need to be considered here. The fence alignment will be altered also.

Option 2 addresses the fence/wall alignment and fills the existing beam seat area outside of the proposed bridge. Option 2 probably provides a cleaner appearance over option 1. Let me know if you have any questions.

Ron

"Ax, Michael J." <mjax@fredweberinc.com>

03/03/2010 11:40 AM

To "'John.Grana@modot.mo.gov'" <John.Grana@modot.mo.gov>

cc "Clark, Matthew R." <mrclark@fredweberinc.com>

Subject Madison and St. Ave Wall Modifications

John,

Here are some sketches for what Matt and I were talking about in the meeting last week.

Option 1 is to just dowel onto the existing backwall and extend it up to match existing on the one end and to match elevation F on bridge side. I estimate that there is about $42,000 savings to do this.

Option 2 is to leave the existing backwall and fill the void with concrete and extend it up to match the existing wall and elevation F on the bridge side. I estimate there will be approx $15,000 dollars in savings for this method.

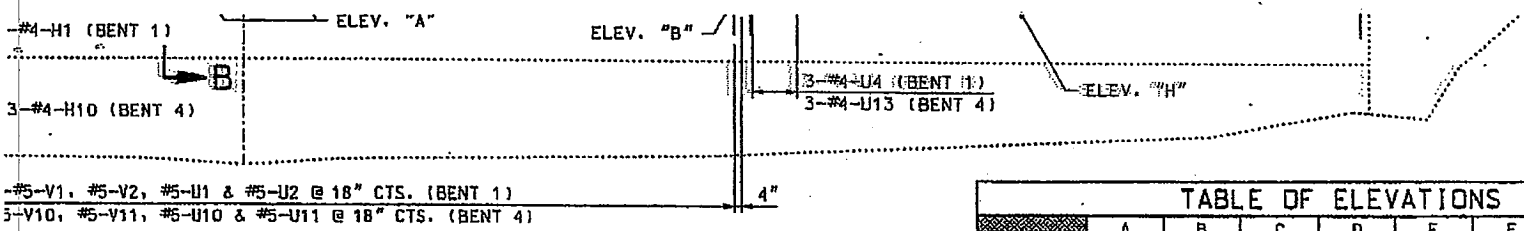
I haven't written up anything as far as an official proposal because I wanted to see which way you were interested in going. Call me if you have any questions, or let me know and I'll get the official submittal in. As you know, we're getting ready to do some of this work, so if you think either or both of the options will get hung up for any reason, let's move on to the next option or proceed as planned.

Thanks John…

Mike

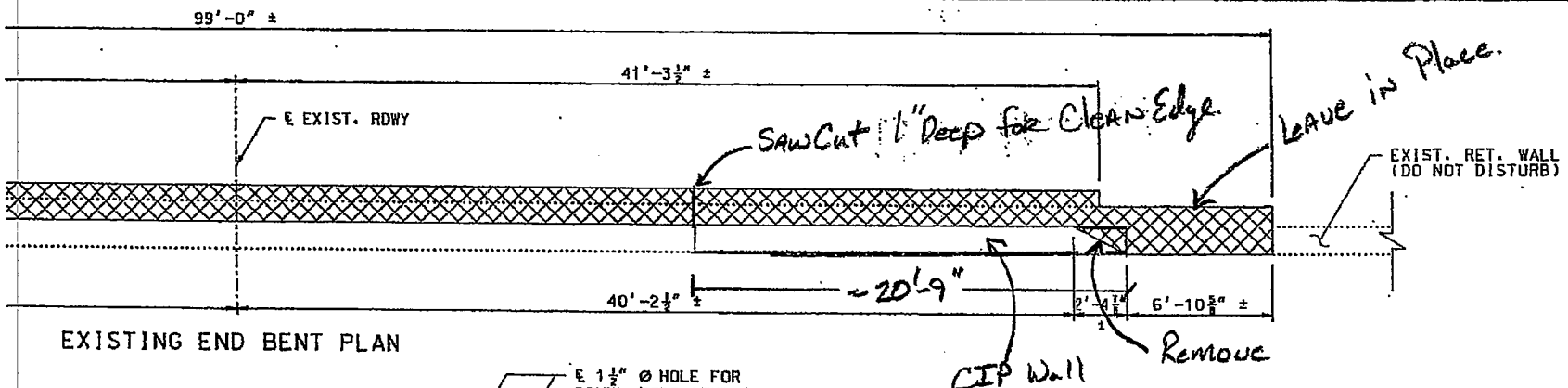
(See attached file: VE Option 2.pdf)(See attached file: VE Option 1.pdf)

VE Option 2

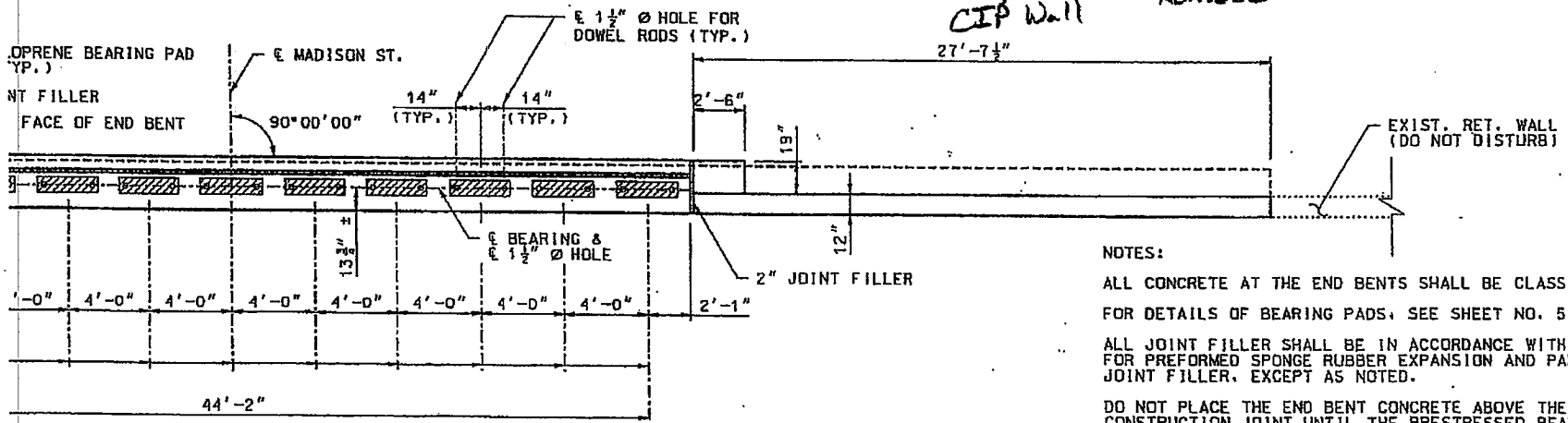


PROPOSED END BENT ELEVATION

TABLE OF ELEVATIONS								
	A	B	C	D	E	F	G	H
END BENT NO. 1	467.55	467.24	470.34	469.53	469.22	471.85	472.04 ±	466.29 ±
END BENT NO. 4	463.00	462.69	465.72	464.98	464.67	467.23	466.99 ±	461.27 ±



EXISTING END BENT PLAN



PROPOSED END BENT PLAN

END BENT DETAILS

NOTES:

ALL CONCRETE AT THE END BENTS SHALL BE CLASS B.

FOR DETAILS OF BEARING PADS, SEE SHEET NO. 5.

ALL JOINT FILLER SHALL BE IN ACCORDANCE WITH SEC 1057 FOR PREFORMED SPONGE RUBBER EXPANSION AND PARTITION JOINT FILLER, EXCEPT AS NOTED.

DO NOT PLACE THE END BENT CONCRETE ABOVE THE BEAM SEAT CONSTRUCTION JOINT UNTIL THE PRESTRESSED BEAMS HAVE BEEN ERECTED.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1-1/2", UNLESS OTHERWISE SHOWN.

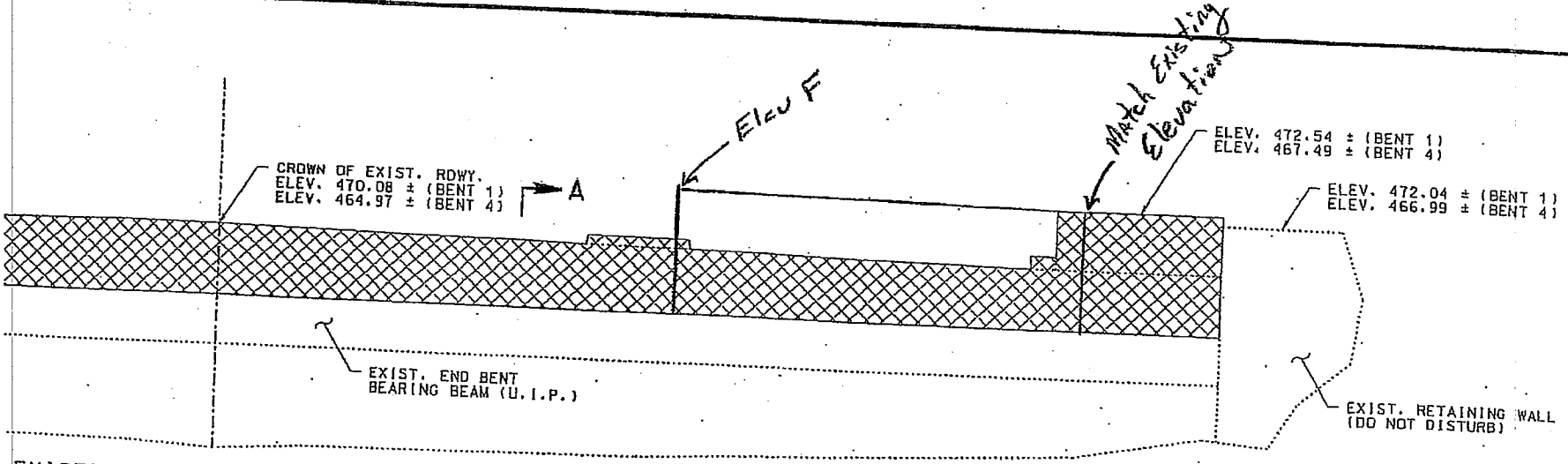
FOR SECTIONS A-A, B-B, C-C & D-D SEE SHEET NO. 5.

FOR DETAILS OF CHAIN-LINK FENCE (RETAINING WALLS) SEE MISSOUR STANDARD PLANS FOR HIGHWAY CONSTRUCTION STANDARD NO. 607.11. MAXIMUM GAP ALONG FENCING SHALL BE 6" AT ALL LOCATIONS.

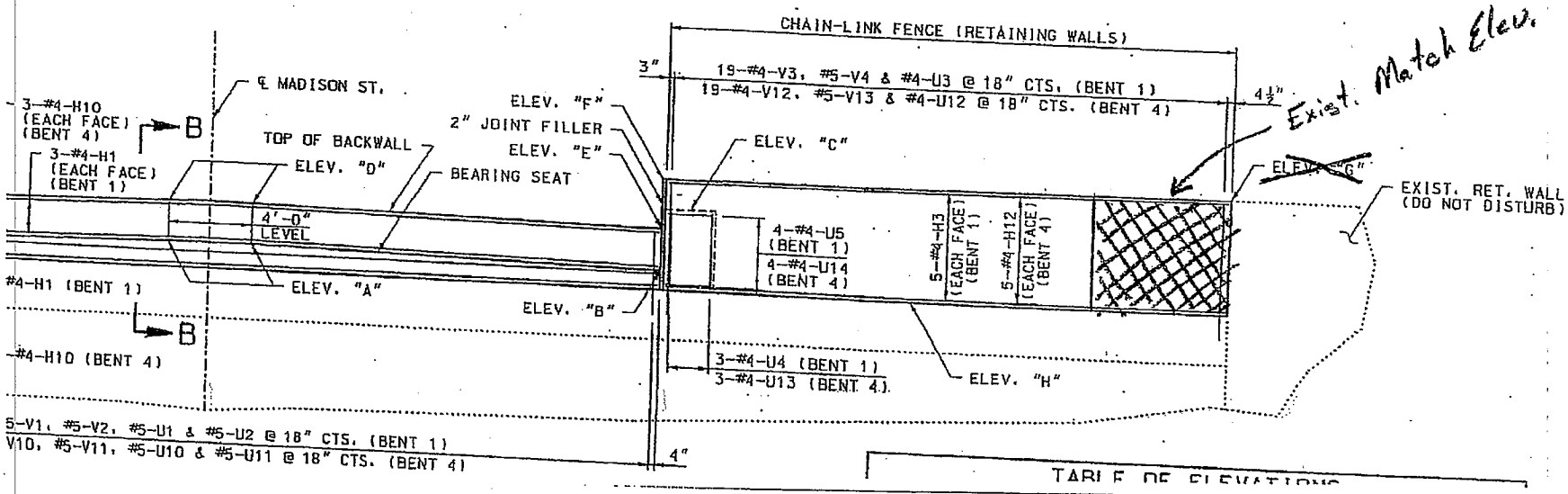
THIS DRAWING IS NOT TO SCALE, FOLLOW DIMENSIONS.

VE Option #2

All 4 Corners Typical.



EXISTING END BENT ELEVATION A



VALUE ENGINEERING CHECK SHEET

TYPE OF WORK

(Check one that applies)

- [x] Bridge/Structure/Footings
- ☐ Drainage Structures (RCP, RCB, CMP's, ect.)
- ☐ TCP/MOT
- ☐ Paving (PCCP, ect.)
- ☐ Grading/MSE Walls
- ☐ Signal/Lighting/ITS
- ☐ Misc. _____

SUMMARY OF PROPOSAL

(If needed, condense summary to a couple of lines)

_____Leave in Place existing wing walls of existing bridge and pour around.

SCANNING OF DOCUMENT

If the proposal is large, please mark or make note, which pages need to be scanned into the database. If there are special instructions, make note of them here.